

PATENT SPECIFICATION

792,669

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COMPLETE SPECIFICATION.

Improvements in or relating to Machines for Carding Textile Fibres.

We, DOUGLAS FRASER & SONS LIMITED, a British Company, of Westburn Foundry, Arbroath, Angus, Scotland, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to improvements in machines for carding textile fibres, particularly bast fibres such as flax, jute, hemp and sisal.

Heretofore, it was customary to construct a carding machine with two upright side frames or gables spaced apart at the front and at the rear by horizontal rails called, respectively, the front rail and the back rail, the back rail usually being formed with two or more apertures each of which was normally closed by a door or guard. If the lower edge of the back rail was located more than eight inches from the floor, it was necessary, to prevent access from the rear to the moving parts of the machine while the machine was operating, to provide additional doors or guards one of which was located above the back rail and another of which was located below the back rail.

When it was desired to gain access from the rear to the guarded parts of the machine, it was necessary to open or to remove at least one of the additional doors or guards and to climb over or under the back rail.

It is to be understood that the rear of the machine is the end of the machine remote from the fibre delivery end.

In a carding machine according to the present invention incorporating at the rear of the machine an upright end frame or rail so located that, when the machine is mounted on a floor, access is obtainable from the rear of the machine to the space

beneath the carding elements solely through a gap between the lower edge of the frame or rail and the floor of such dimensions as to permit ready access to said space, the gap being normally closed by a door or guard adapted to be interlocked with the starting mechanism of the machine.

The said door or guard may be mounted for sliding horizontal movement. The door or guard may be so contrived as to open for one half only of the width of the machine.

A carding machine according to the invention is illustrated in the accompanying drawings in which:—

Fig. 1 is a rear elevation of the carding machine with the door or guard in position in the machine.

Fig. 2 is a rear elevation with the door or guard removed.

Fig. 3 is a fragmentary perspective view of the rear of the machine.

Fig. 4 is a fragmentary side elevation drawn to a larger scale than Fig. 3.

Referring to the drawings, 1, 2 denote two upright side frames or gables spaced apart at the rear of the machine by an upright end frame or a horizontal back rail 3 so located as to present, when the machine is mounted on the floor 4, a gap 5 between the lower edge of the frame or the rail 3 and the floor 4.

The gap 5 is normally closed by a door or guard 6 adapted to be interlocked with the starting mechanism of the machine.

The door or guard 6 is mounted in the machine for sliding horizontal movement and is provided with rollers 7 adapted to track a horizontal rail 8 carried by the frames or gables 1, 2. The door or guard 6 is so contrived as to open for one half only of the width of the machine.

9 denotes a bolt mounted on a rod 10 and

engageable, when the rod 10 is turned about a horizontal axis, with a slot in the door or guard 6. Mounted on the rod 10 exteriorly of the frame or gable 2 is an operating knob
5 in the form of a cam 11 engageable with a cam follower 12 operatively connected to a switch 13 in series with the control circuit of the starting mechanism (not illustrated) of the machine.

10 14 denotes a fixed guard adapted to mask any lateral gap between the door or guard 6 and the frame of the machine.

If there is a gap between the upper edge of the frame or the rail 3 and the frame of
15 the machine, the said gap is preferably masked by a fixed guard (not illustrated).

In practice, the frame or the back rail 3 may be located at any desired height above the floor 4 to provide for ready access by
20 a workman to the normally guarded parts of the machine when the door or guard 6 is opened, the lower edge of at least part of the frame or the back rail 3 being preferably located at least thirty inches from the
25 floor 4. The described arrangement also permits the floor under the machine to be cleaned easily.

What we claim is:—

30 1. A machine for carding textile fibres, incorporating at the rear of the machine an upright end frame or rail so located that, when the machine is mounted on a floor,

access is obtainable from the rear of the machine to the space beneath the carding
35 elements solely through a gap between the lower edge of the frame or rail and the floor of such dimensions as to permit ready access to said space, the gap being normally closed by a door or guard adapted to be interlocked with the starting mechanism of the machine.
40

2. A machine as claimed in Claim 1 incorporating two upright side frames or gables spaced apart at the rear of the machine by the upright end frame or a rail.

3. A machine as claimed in Claim 1 in
45 which the door or guard is movable in a controlled path and is so contrived as to open for one half only of the width of the machine.

4. A machine as claimed in Claim 1 in
50 which a bolt engageable with a slot in the door or guard is operable in conjunction with a switch in series with the control circuit of the starting mechanism of the machine.
55

5. A machine for carding textile fibres, substantially as described with reference to the accompanying drawings.

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PROVISIONAL SPECIFICATION.

Improvements in or relating to Machines for Carding Textile Fibres.

60 We, DOUGLAS FRASER & SONS LIMITED, a British Company, of Westburn Foundry, Arbroath, Angus, Scotland, do hereby declare this invention to be described in the following statement:—

65 This invention relates to improvements in machines for carding textile fibres, particularly bast fibres such as flax, jute, hemp and sisal.

Heretofore, it was customary to construct a carding machine with two upright side
70 frames or gables spaced apart at the front and at the rear by horizontal rails called, respectively, the front rail and the back rail, the back rail usually being formed with two or more apertures each of which was normally closed by a door or guard. If the
75 lower edge of the back rail should be located more than eight inches from the floor, it was necessary, to prevent access from the rear to the moving parts of the machine while the machine was operating, to provide additional doors or guards one of which was
80 located above the back rail and another of which was located below the back rail.

When it was desired to gain access from

the rear to the guarded parts of the machine,
85 it was necessary to open or to remove at least one of the additional doors or guards and to climb over or under the back rail.

It is to be understood that the rear of the machine is the end of the machine remote
90 from the fibre delivery end.

A carding machine according to the present invention is provided at the rear with a single back rail so located in the machine
95 as to present, when the machine is mounted on the floor, a gap between the floor and the lower edge of the rail, the gap being normally closed by a door or guard interlocked with the starting mechanism of the machine.
100

The said door or guard may be mounted for sliding horizontal movement. The door or guard may be so contrived as only to open for half the width of the machine.

If there should be a gap between the upper
105 edge of the back rail and the frame of the machine the gap is preferably masked by a fixed guard.

In practice, the back rail may be located at any desired height above the floor to pro-
110

5 vide for ready access to the normally guarded parts of the machine when the door or guard is opened, the lower edge of the back rail being preferably located at least thirty inches from the floor. The described arrangement also permits the floor under the machine to be cleaned easily.

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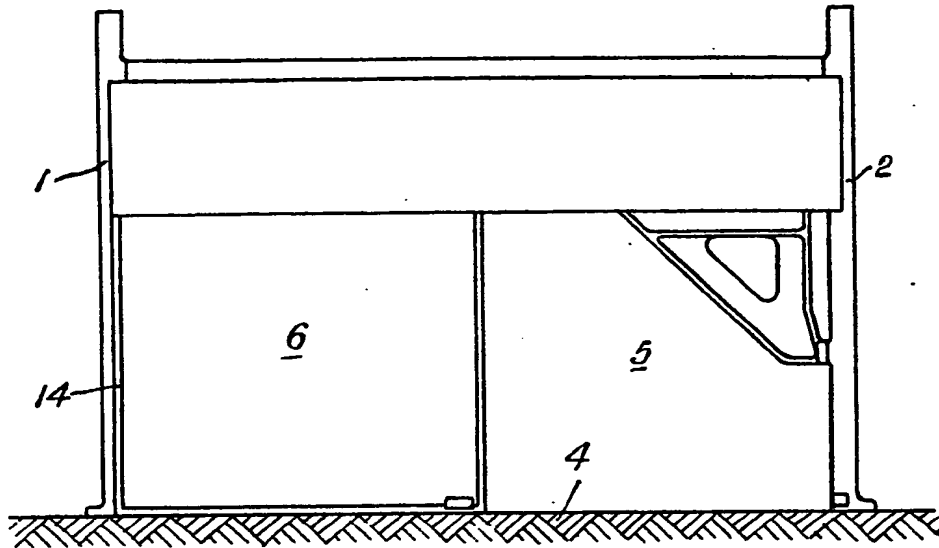


FIG. 1.

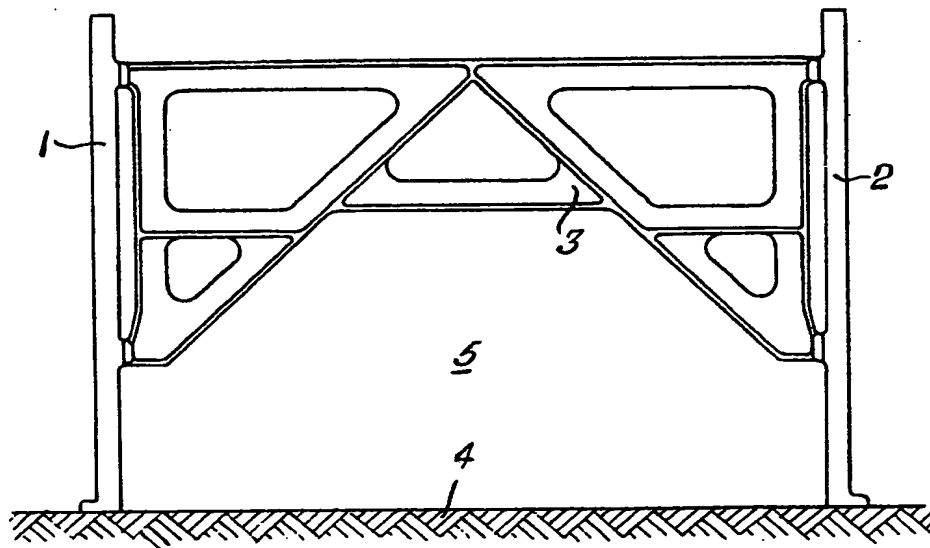
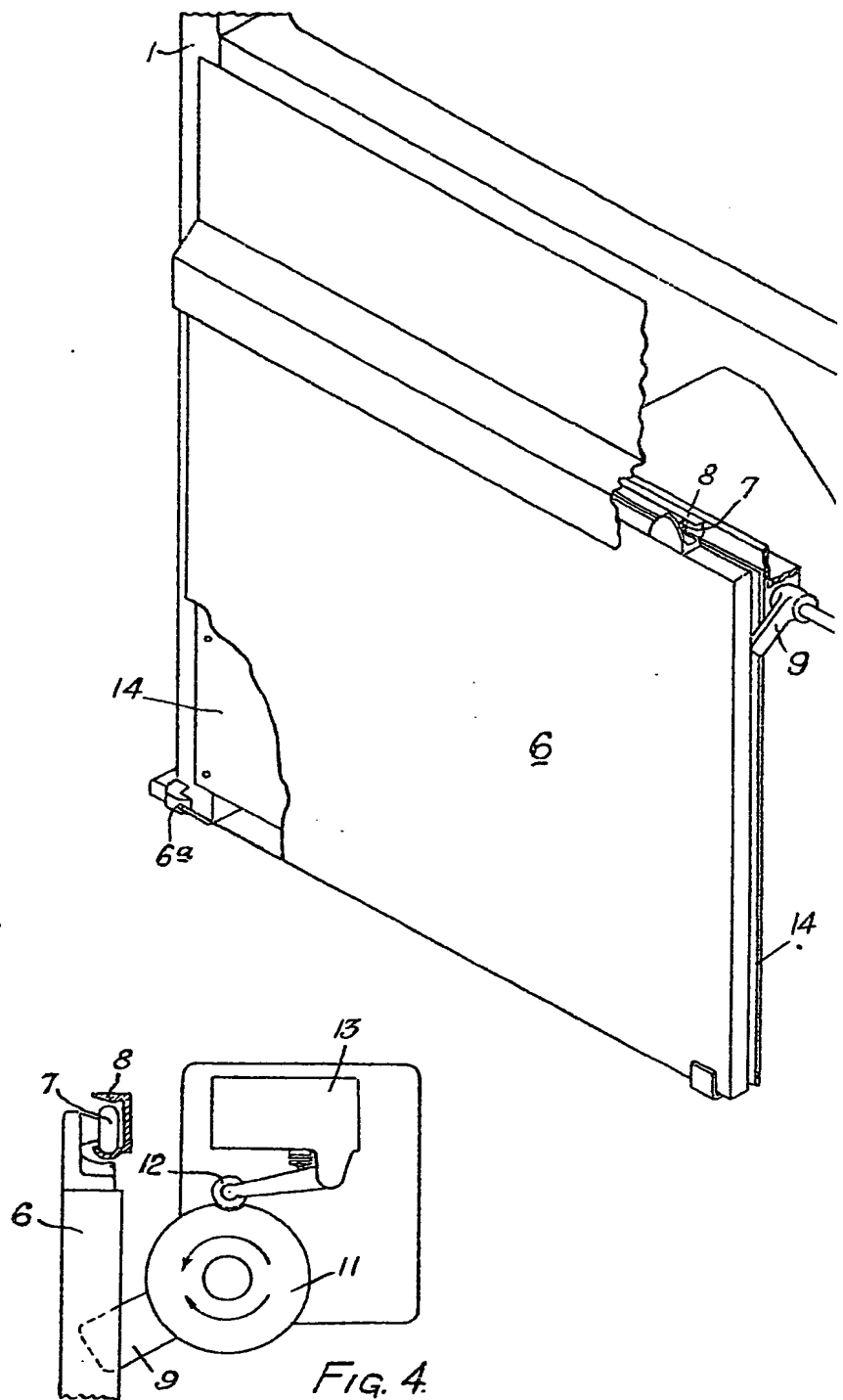


FIG. 2.



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2 SHEETS

This drawing is a reproduction of
the Original on a reduced scale.

SHEET 2

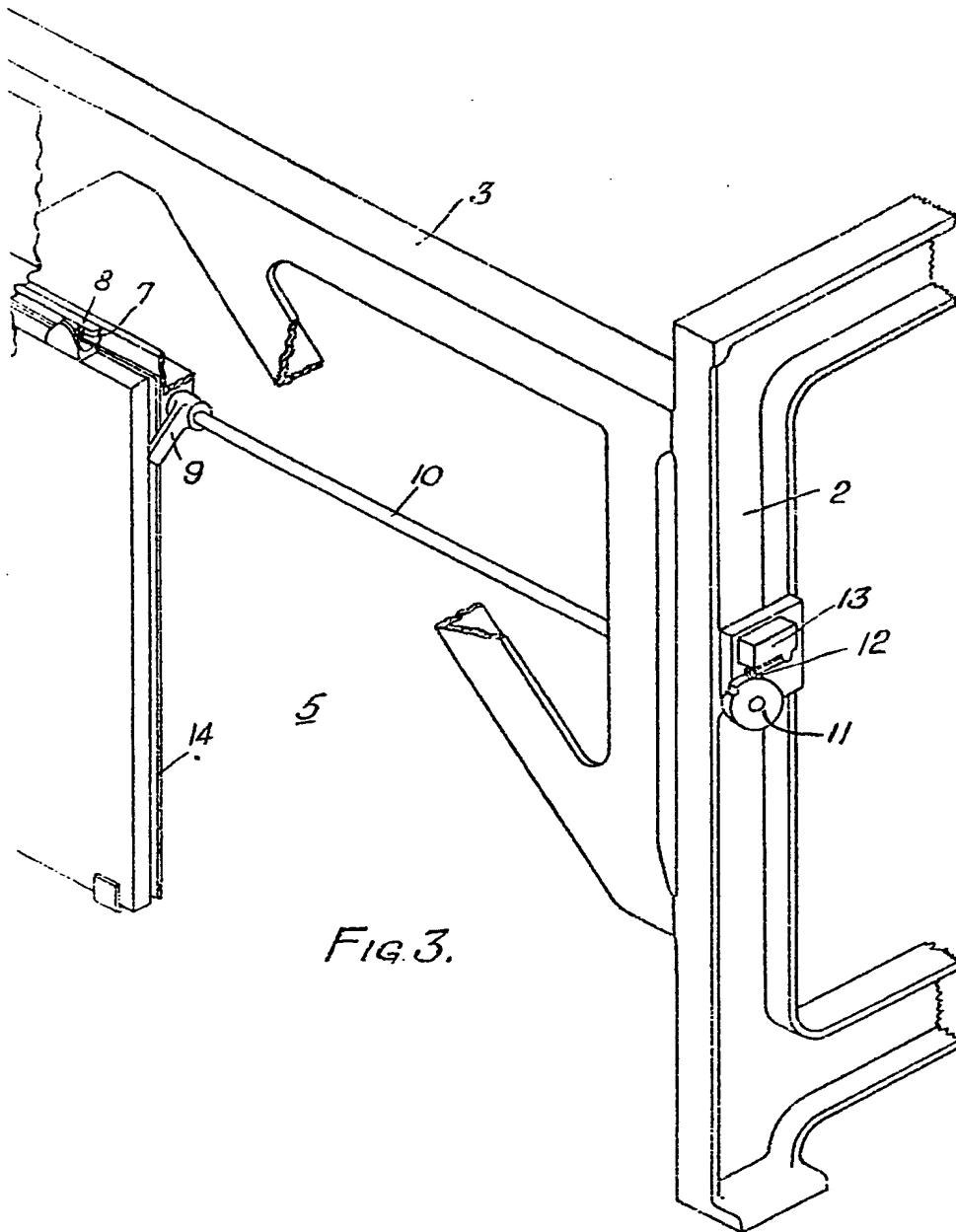


Fig. 3 is a perspective view of a mechanical assembly. It features a main body (1) with a central rectangular opening (6). A long, narrow strip (3) is attached to the top of the body. A horizontal bar (10) is positioned across the top of the opening. A small, rectangular component (12) is mounted on the bar, with a circular element (11) and a small rectangular piece (13) attached to it. A vertical support (9) is located on the right side of the opening. A small, rectangular component (8) is mounted on the left side of the opening. A small, rectangular component (7) is mounted on the bottom of the opening. A small, rectangular component (14) is mounted on the right side of the opening. A small, rectangular component (14) is mounted on the bottom of the opening. A small, rectangular component (14) is mounted on the right side of the opening. A small, rectangular component (14) is mounted on the bottom of the opening.

Fig. 4 is a cross-sectional view of a component. It shows a circular element (11) with a central hole (9). A small, rectangular component (12) is mounted on the side of the circular element. A small, rectangular component (13) is mounted on the top of the circular element. A small, rectangular component (8) is mounted on the bottom of the circular element. A small, rectangular component (14) is mounted on the right side of the circular element. A small, rectangular component (14) is mounted on the bottom of the circular element. A small, rectangular component (14) is mounted on the right side of the circular element. A small, rectangular component (14) is mounted on the bottom of the circular element.

FIG. 4.